

Mr. Howard Borgstrom
Director
Business Operations Center
Office of the Chief Financial Officer
US Department of Energy
1000 Independence Avenue, SW
Washington, DC
Sent by e-mail

Dear Mr. Borgstrom:

Earth Track is submitting these comments pursuant to RIN 1901-AB21, "Loan Guarantees for Projects that Employ Innovative Technologies," for which the Department has issued a Notice of Proposed Rulemaking (NPR).

Earth Track focuses on tracking and valuing government subsidies, including those provided through subsidized loans and guarantees. We do not have a commercial interest in any of the technologies this program may support. However, given DOE's checkered past regarding credit subsidies and the billions of dollars of commitments involved with the Title XVII program, we are concerned both about the loss of taxpayer money and the potential of creating long-lasting distortions in the relative economics of various energy resources.

The NPR did not go far enough in outlining how DOE would ensure non-political allocation of resources and protection of taxpayer capital. Many of the ways these issues were addressed in the current version were mostly descriptive in nature, leaving too much guesswork about how actual implementation and institutional oversight will proceed. The final rule should provide:

- A much more detailed roadmap on the institutions DOE intends to build to assess credit risk and subsidies; and whether some of those functions would be more appropriately outsourced to more seasoned and disinterested parts of the federal government.
- The metrics the Department plans to use to establish neutral vetting of funding options across all eligible energy resources.
- How the Department plans to manage and contest the likely politicization of funding rounds through the Executive Office's budget proposals or Congressional legislative activity.

1. NPR provides little resolution on how DOE will ensure the most promising projects are chosen for access to lucrative federal credit subsidies via transparent and quantitative project comparisons. A combination of wide latitude in determining project eligibility to participate in funding rounds with imprecision on how performance "improvement" will be measured create the conditions for skewed and politicized distribution

of billions of dollars in guarantees. These conditions bode poorly for the long-term success of this program.

a) DOE acknowledges wide latitude in targeting loan guarantees and acknowledges they are under no obligation to run open contests across all energy sources authorized under Title XVII of the Energy Policy Act. The NOPR is mostly silent on the establishment of rigorous project comparison metrics and robust institutions that would ensure the billions in guarantees are effectively targeted.

Not all energy resources eligible under the Energy Policy Act of 2005 (EPACT) are necessarily eligible in particular -- or indeed any -- funding rounds. In fact, DOE's NOPR lists specific programmatic objectives, loan guarantee authority or available funds as possible criteria by which guarantees under Title XVII can be awarded. The NOPR includes the example (p.7) of the Administration's 2008 budget that proposes \$4 billion in guarantees for centralized power, \$4 billion for biofuels and other clean fuels, and \$1 billion for new electric transmission or renewable energy power systems. This example is an early indication of the power that the legislative or executive branches will seek to exert in earmarking funding to favored interest groups. The political influence leveraged by these groups is greatly enhanced by DOE's view that Congressional appropriations are needed to support DOE's credit authority under Title XVII, and that Congress can structure these appropriations however it sees fit. While in theory the executive and legislative branches could choose to exert their influence based on the technical merit of the projects alone, assuming they will in fact do so would be both imprudent and naïve.

The risks of political influence are further compounded by the fact that funding under Title XVII will be in the form of loan guarantees, for which valuation and transparency are far more difficult to attain than with direct payments. In addition, recent mandates to publish legislative earmarks (albeit only partially effective thus far even for direct payments) would not seem to apply at all to Title XVII loan guarantee decisions.

b) DOE's proposed language on eligibility for "new or significantly improved technology" is imprecise and exacerbates the risk of this loan guarantee program replicating the poor targeting and performance of so many past federal loan guarantee efforts.

DOE defines (on p. 40) "new or significantly improved technology" as one "concerned with the production, consumption, or transportation of energy, and that has only recently been discovered or learned, or that involves or constitutes one or more meaningful and important improvements in the productivity or value of the technology." This is a descriptive definition rather than a fully operational one. While DOE acknowledges that they have not developed precise eligibility requirements, they seem to underestimate the problems that this definitional looseness creates for sound fiscal management of the loan guarantee program. The Department should do a much better job in the final rule to establish guidelines for future decisions that establish appropriate accountability, transparency, and consistency in project evaluation across sectors. Some possible guidelines include:

- **A technology that is new, but not improved, should not be subsidized.** The program needs to remain focused on its core objectives for technologies that are significantly better than the current market options in key parameters of concern.

- **Quantitative measures of "significant improvement" should be included in the final rule.** These should include a variety of parameters, since different energy resources will vary in their benefits and limitations. Parameters might include conversion efficiency, environmental profile, or delivered cost per unit energy. They should force comparisons not just within an energy type, but across all eligible resources under Title XVII. The objective of this measurement should be to demonstrate where narrowly targeted eligibility requirements, most likely mandated via Congressional language, is forcing multi-billion dollar guarantees into projects offering only mediocre improvements in environmental or energy performance.

c) Fuel cycles are complex and their many steps offer ways to mask and whitewash polluting, ineffectual, or inefficient technologies – presenting them as much better than they really are. The final rule needs to do a better job conveying how DOE's project vetting process and comparative metrics will appropriately flush out negative characteristics. For example:

- Will "renewable energy systems" be tested to ensure they are not simply displacing carbon from one point of the production cycle to another, as routinely occurs with coal-fired corn ethanol?
- How will carbon capture and sequestration systems involving agricultural and forestry systems be vetted to ensure system leakage rates and sequestration duration are accurately assessed?
- While advanced coal technologies may represent improvements over existing coal, are they better than other fuel options or investments into efficiency?
- How will the high cost and opportunity cost from long construction periods for nuclear reactors be weighed against smaller scale, more rapidly deployable alternatives? How will negative nuclear-related externalities regarding uninsured accident risks, radioactive wastes, and proliferation concerns be integrated into the trade-offs between nuclear and non-nuclear technologies in DOE's project selection?

d) Proposed benchmarks on the "newness" of a technology may actually slow technological deployment. DOE proposes cut-offs based on technologies used at less than five plants, or less than five years. Under the plant-based cut-off, new plants could be delayed by developers in order to ensure access to federal guarantees. This gaming strategy would likely be successful if the target technology is controlled by only one or two firms (not uncommon with emerging technologies). Cutoffs based on the number of years may direct subsidies to technologies that are already commercially viable without federal support.

2. DOE's efforts to structure guarantees, equity participation, and third party risk assessment by credit agencies are all admirable in trying to establish proper incentives for borrowers. However, the language in the NOPR may be too general to ensure that these approaches are adopted systematically and comprehensively across the entire portfolio of guarantees.

a) **Debt structure.** DOE's insistence on holding senior debt, and on preventing the stripping of federally guaranteed project debt for sale to separate investors seems sensible given the objective of the program. While industry has argued that they will be less able to sell debt in secondary markets with this approach, the structure nonetheless more effectively ties the project developers to the project (rather than allowing them to sell their risk to a hedge fund somewhere). This should help ensure a greater focus on the long-term viability of the technologies chosen, and should be retained in the final rule. Guidance regarding appropriate maximum levels of debt guaranteed for particular project riskiness should be formalized in the final rule. The highest risk projects should likely cap federal guarantees at levels lower than the 80% maximum allowed under the law.

b) **Equity.** DOE has qualitatively listed an equity interest amongst project participants as an important criteria in determining awards. The Department should maintain its insistence on this element, as it is critical in establishing a more stable incentive structure for these projects. The final rule should provide more clarity on the minimum level of equity participation you will seek, and state it as a formal requirement. Mandated equity levels should be developed using examples from other high risk investments that have proceeded without federal guarantees. These comparables should appropriately include high risk debt structures that convert to equity in times of project duress when assessing the level of equity these other projects have used.

3. Defining and quantifying the credit subsidy under this program needs improvement. There is a popular perception of the Title XVII guarantees that the charges to the borrower for the credit subsidy and administrative costs somehow mean there is no subsidy associated with the guarantee. Obviously, if this were really the case people wouldn't be lining up to apply to the program. In fact, the loan guarantees offer quite large subsidies to many borrowers.

a) **Intermediation benefit of guarantees is both large and distortionary.** Although DOE uses a statutory definition of credit subsidy (mostly driven by the expected value of a default), it is important to acknowledge that the federal guarantees bequeath an enormous credit intermediation benefit to selected projects. This occurs when high risk borrowers are able to access money not at their very high interest rate, but at the cost of funds for the US Treasury (the so-called "risk-free" rate). High risk debt is replaced by debt at roughly the risk-free rate of the US Treasury, a huge benefit to borrowers whether or not there is a default.

An important secondary benefit arises from reconfiguring capital structures so that even high risk technologies can rely on 80% low cost debt, rather than much more expensive equity. These factors can be worth 750-1000 basis points in capital cost savings for developers in the nuclear sector, for example. In conjunction with the potential selection bias concern noted in comment 1 above, the federal loan guarantees seem likely to introduce significant inter-fuel distortions in energy markets as the program grows.

b) **Institutional structures for evaluating credit subsidies and risks need to be spelled out in much greater detail.** Although the NOPR made general references to steps DOE is taking to ensure credit subsidies (as they have defined them in terms of the expected value of default) will be properly vetted, the final rule should contain much clearer, robust evaluations of how this is to actually happen. While DOE may in theory be able to develop this expertise

in house, there may be reasons both of experience and conflicts of interest for the credit evaluations to be done elsewhere in the government.

c) **Requirements to price the value of the loan guarantee using independent third parties is both innovative and beneficial.** The data captured through this process should be used to improve federal credit subsidy modeling across the government. The NOPR includes two interesting requirements in the pre-application and application stage. The pre-application stage submittals require an assessment of the impact that the guarantee will have "on the interest rate, debt term, and overall financial structure of the project." (p. 44). At the application stage, projects must also have a credit evaluation of the investment excluding the federal guarantee conducted using a nationally-recognized credit agency. Together, these evaluations provide a rich source of data from which to develop or improve federal models of credit subsidization. Data from these submittals should be collected in a database that can be studied (perhaps under terms of confidentiality) by both the Congressional Budget Office and the US Treasury to improve their assessment of how risk subsidies affect market structure and the potential intersectoral distortions they may create. The aggregate findings from these studies should be made public.

4. Other problems with proposed program structure

a) **Exemptions of first round pre-applications from funding controls developed in the final rule create potential risks for proper program management.** The NOPR proposes that the first round of submitted solicitations (143 projects submitted pre-applications to DOE) would not be bound by the proposed set of rules now being promulgated. DOE would have some discretion to add terms to the final loan guarantee agreement (which both parties would agree to), and won't necessarily exempt projects from these rules permanently. However, it is clear that the first round projects would potentially have much less stringency or transparency than later rounds. The final rule should more directly assess the risks of this decision on financial performance and on the quality of project selection.

b) **The NOPR seems to shift the cost of compliance with the National Environmental Policy Act (NEPA) from the industry to DOE.** Projects that may receive federal guarantees in later rounds will be subject to the requirements of NEPA. However, item 23 on page 50 of the NOPR requests only general information from the applicant under the application stage, and implies that DOE will be responsible for carrying out the required reviews under NEPA: "...that will enable DOE to undertake and complete any necessary reviews under the National Environmental Policy Act of 1969." Is DOE paying for these reviews? This should be clearly stated if it is the case, along with the rationale for not having the project sponsor internalize this important level of review. Having DOE play this role adds an additional layer of subsidy, as well as some potential conflicts of interest in how the assessments of environmental impact are carried out and reviewed. It also loses an important incentive to pre-screen technologies out of the application process on the basis of potential environmental impacts.

c) **Recovery of fees from guarantee recipients will not recoup all DOE costs, and the proposed approach tries to assess fees based on costs associated with specific applicants.** The NOPR provides no indication that DOE's existing cost accounting systems are precise enough to enable this type of cost evaluation and recovery. DOE should develop a retroactive performance fee on successful projects that enables it to recoup the pre-

application processing costs, given its decision not to charge that stage of costs back to applicants. This approach would seem more in line with Congressional intent under EPACT. The final rule should provide more information demonstrating the Department's capability to oversee applicant-specific cost tracking. If DOE will be unable to do this accurately, the final rule should include an adjusted fee recovery regime.

d) More comprehensive tracking of other project subsidies needs to be integrated into project review and applicant evaluation. The NOPR notes that reliance on other public subsidies will not disqualify a project from consideration, but will be a negative factor in consideration for these guarantees. It then specifically mentions that nuclear plants receiving multiple levels of federal assistance may "advance important national energy priorities" (p. 22). Subsidy "stacking," where varied sources of government support (including state and local subsidies as well) is common with energy projects and results in situations where the bulk of the development risk has been shifted to taxpayers. Projects proceed based as much on the magnitude of subsidization as on any potential merit in terms of technical example or energy security. The public sector risk of wasted funds and unsolved energy problems grows much larger when each subsidy decision is made without an understanding of the full picture.

In the application stage (item 13, p. 49), all sources of debt and equity must be listed. However, this tally does not seem to pick up all venues of value transfer from federal, state, or local governments, specifically via tax breaks or insurance subsidies. Many of these benefits may be buried in the assumptions behind pro-forma financial plans submitted by applicants, rather than clearly visible within them. The final rule should require all applicants to submit a full tally of state and local subsidies, including tax exemptions. This tally should be made public with the award of any federal guarantee, ensuring the public at least an *ex post* capability to assess the true level of risk shifting onto taxpayers.

Thank you for the opportunity to provide input to this rulemaking process.

Sincerely,

Doug Koplow
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